

Notice of Allowability

Application No.

10/714,540

Examiner

Joon H. Hwang

Applicant(s)

CAO ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to a telephone interview with Todd Fronek (Reg. No. 48,516) on 8/3/07.
2. ☒ The allowed claim(s) is/are 1,3-7,9,10,21,23,24,26 and 30 (renumbered as 1-13).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. The applicants amended claims 1, 9, 11, and 21 and canceled claims 2, 8, 15, and 22 in the amendment filed on 7/13/07.

The pending claims are 1, 3-7, 9-14, 16-21, 23-24, 26, and 30.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Todd Fronek (Reg. No. 48,516) on 8/3/07.
4. The application has been amended as follows:

Rewrite claim 1 as follows:

"1. A computer-implemented method comprising:
receiving a document;
determining a file type for the document;
segmenting the document into blocks of text as a function of outline information if
outline information is associated with the document;

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if outline information is not associated with the document, then segmenting the document into blocks of text as a function of tags if tags are associated with the document;

if outline information and tags are not associated with the document, then performing:

a) identifying potential segmentation points in the document based on text in the document; and

b) segmenting the document into blocks of text based on the potential segmentation points and on a similarity of text adjacent the potential segmentation points;

determining if the blocks of text need to be further segmented based on a size of the blocks of text;

if the blocks need to be further segmented, then performing:

a) identifying potential segmentation points in the blocks based on text in the blocks; and

b) segmenting the blocks into sub-blocks of text based on the potential segmentation points in the blocks and on a similarity of text adjacent the potential segmentation points in the blocks; and

outputting at least one keyword and a summary for the document that is indicative of blocks of text in the document and generating at least one keyword and summary for any sub-blocks in the text.”;

Rewrite claim 3 as follows:

"3. The computer-implemented method of claim 1 wherein segmenting as a function of tags includes analyzing HTML tags in the document and segmenting text in the document based on the HTML tags.";

Rewrite claim 4 as follows:

"4. The computer-implemented method of claim 3 wherein segmenting based on potential segmentation points further includes using a position of text in the document.";

Cancel claims 11-14 and 16-20;

Rewrite claim 21 as follows:

"21. A mobile device for handling documents, comprising:

a document retrieval module retrieving a plurality of documents from at least one document source based on a document query request received from a mobile device;

a document outline parsing module determining a file type of each of the plurality of documents and for each document:

segmenting the document into blocks of text as a function of outline information if outline information is associated with the document;

if outline information is not associated with the document, then segmenting the document into blocks of text as a function of tags if tags are associated with the document;

if outline information and tags are not associated with the document, then establishing potential segmentation points in the document as a function of the text in the document and segmenting the document into blocks of text based on the potential segmentation points and on a similarity of adjacent paragraphs surrounding the potential segmentation points;

determining if the blocks of text need to be further segmented based on a size of the blocks of text;

if the blocks of text need to be further segmented, then producing sub-blocks of text from the blocks of text based on potential segmentation points in the blocks of text and on a similarity of adjacent paragraphs surrounding the potential segmentation points in the blocks of text; and

forming a tree structure indicative of the blocks and sub-blocks; and
a summarization module outputting at least one keyword and a summary for each block and sub-block in each of the plurality of documents based on the tree structure to selectively render the at least one keyword, summary, blocks and sub-blocks of text as a function of input to the mobile device.”;

Rewrite claim 23 as follows:

“23. The mobile device of claim 21 wherein the document outline parsing module further analyzing HTML tags in the document and segmenting text in the document based on the HTML tags.”;

Rewrite claim 24 as follows:

"24. The mobile device of claim 23 wherein the document outline parsing module further segmenting the document using a position of text in the document.";

Rewrite claim 26 as follows:

"26. The mobile device of claim 21 and further comprising a module displaying the at least one keyword and summary."; and

Rewrite claim 30 as follows:

"30. The mobile device of claim 21 and further comprising a module converting an audio file to a text document.".

Allowable Subject Matter

5. Claims 1, 3-7, 9-10, 21, 23-24, 26, and 30 are allowed.

Claims 1 and 21 identify the distinct features, determining a file type of a document; segmenting the document into blocks of text as a function of outline information if outline information is associated with the document; segmenting the document into blocks of text as a function of tags if tags are associated with the document; establishing potential segmentation points in the document as a function of the text in the document and segmenting the document into blocks of text based on the potential segmentation points and on a similarity of text adjacent the potential segmentation points; determining if the blocks of text need to be further segmented

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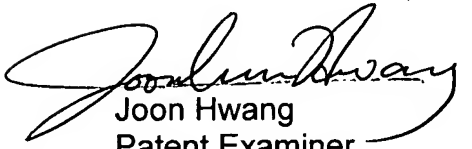
based on a size of the blocks of text; and segmenting the blocks into sub-blocks of text based on potential segmentation points in the blocks of text and on a similarity of text adjacent the potential segmentation points in the blocks of text, which are not taught or suggested by the prior art of records. The closest prior art, Buyukkokten et al. ("Seeing the Whole in Parts: Text Summarization for Web Browsing on Handheld Devices", WWW10, May 2-5, 2001, Hong Kong) disclosing displaying web pages on a mobile device with keyword and summary, fails to suggest the claimed limitations as mentioned above in combination with other claimed elements. The above features in conjunction with all other limitations of the dependent and independent claims 1, 3-7, 9-10, 21, 23-24, 26, and 30 are hereby allowed.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joon Hwang
Patent Examiner
Technology Center 2100

8/3/07